REMARKS

The new claims are so constructed as to clearly and patentably distinguish over the cited references.

In particular, the new claims are drawn to the embodiment of Fig. 2 and should be interpreted with specific reference to the waveforms of Fig. 3.

Applicant hopes that Examiner will find the new claims understandable without further elaborations.

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CLAIMS in FWC of Serial No. 06/787,692

147
~~145~~. An arrangement comprising:

DC source means operative to provide a DC voltage at a pair of DC terminals;

inverter means connected with the DC terminals and operative to provide an AC voltage at a pair of AC terminals; the AC voltage having a cycle period; the inverter means including a periodically conducting transistor having a pair of control terminals receptive of a control signal; the inverter means also including a control signal source operative to provide the control signal; the control signal rendering the transistor conductive for a brief period of time once during each cycle period; the duration of the brief period of time being shorter than half the duration of the cycle period;

gas discharge lamp means having a set of lamp terminals; and

circuit means connected between the AC terminals and the lamp terminals; the circuit means being operative to cause a lamp current to flow through the gas discharge lamp means in response to the AC voltage.

148 147
~~146~~. The arrangement of claim ~~145~~ wherein the AC voltage is characterized by having a waveshape that is substantially trapezoidal.

149 147
~~147~~. The arrangement of claim ~~145~~ wherein the instantaneous magnitude of the AC voltage alternates once each cycle period between a first substantially constant-magnitude voltage level and a second substantially constant-magnitude voltage level, existing for a first duration at the first substantially constant-magnitude voltage level and for a second duration at the second substantially constant-magnitude voltage level; the first duration being substantialy equal to the second duration.

150 149
~~148~~. The arrangement of claim ~~147~~ wherein the first duration is substantially shorter than half of the complete duration of the cycle period.

151 150
~~149~~. The arrangement of claim ~~148~~ wherein the first duration is shorter than half of the complete duration of the cycle period by at least one tenth. new

152 ~~150~~. The arrangement of claim 147 ~~145~~ wherein: (i) the DC source means is powered from a pair of power line conductors connected with an ordinary electric utility power line; and (ii) one of the lamp terminals is connected with one of the power line conductors without any intervening impedance means.

153 147
~~151~~. The arrangement of claim ~~145~~ wherein the control signal is a periodic voltage having a peak-to-peak magnitude substantially larger than twice the forward voltage drop of a semiconductor diode junction.

154 147
~~152~~. The arrangement of claim ~~145~~ wherein the inverter includes two transistors series-connected across the DC terminals.

155 147
~~153~~. The arrangement of claim ~~145~~ wherein the control signal source includes a saturable inductor means.

156 155
~~154~~. The arrangement of claim ~~153~~ wherein the circuit means includes an LC circuit having a natural resonance frequency approximately equal to the fundamental frequency of the AC voltage.

157 156
~~155~~. The arrangement of claim ~~154~~ wherein the LC circuit includes a capacitor and an inductor series-connected across the AC terminals.

158 147
~~156~~. The arrangement of claim ~~145~~ wherein the duration of the brief period of time is shorter than half the duration of the cycle period by about one tenth or more.

159 147
~~157~~. The arrangement of claim ~~145~~ wherein:

(a) the instantaneous magnitude of the AC voltage alternates once each cycle period between a first substantially constant-magnitude voltage level and a second substantially constant-magnitude voltage level, existing for a first duration at the first substantially constant-magnitude voltage level and for a second duration at the second substantially constant-magnitude voltage level; the first duration being substantialy equal to the second duration; and

(b) the duration of the brief period is substantially shorter than the first duration.

160 159
~~158~~. The arrangement of claim ~~157~~ wherein the duration of the brief period is shorter than the first duration by about one tenth or more.

161 ~~159~~. The arrangement of claim 147 ~~145~~ wherein the fundamental frequency of the AC voltage is substantially higher than that of the power line voltage usually provided by an ordinary electric utility power line.

162 ~~160~~. An arrangement comprising:

DC source means operative to provide a DC voltage between a first and a second DC terminal;

inverter means connected with the DC terminals and operative to provide an AC voltage between a first and a second AC terminal; the AC voltage having a fundamental cycle period; the fundamental cycle period consisting of a first and a second half cycle; the duration of the first half cycle being about equal to the duration of the second half cycle; the inverter means including a periodically conducting transistor operative to cause the potential of the first AC terminal to be substantially equal to the potential of the first DC terminal during a certain part of the first half cycle and to be substantially different from the potential of the first DC terminal during the remainder of the fundamental cycle period; the duration of said certain part being shorter than the duration of the first half cycle by a substantial amount;

gas discharge lamp means having a set of lamp terminals; and

circuit means connected between the AC terminals and the lamp terminals; the circuit means being operative to cause a lamp current to flow through the gas discharge lamp means in response to the AC voltage.

163 ~~161~~. The arrangement of claim 162 ~~160~~ wherein the duration of said certain part is shorter than the duration of the first half cycle by about one tenth or more.

164 ~~162~~. The arrangement of claim 163 ~~161~~ wherein the duration of said certain part is shorter than four fifths of the duration of the first half cycle.

165 ~~163~~. The arrangement of claim 162 ~~160~~ wherein the AC voltage is characterized by having a substantially trapezoidal waveshape.